



US008523577B1

(12) **United States Patent**
Huang et al.

(10) **Patent No.:** **US 8,523,577 B1**
(45) **Date of Patent:** **Sep. 3, 2013**

(54) **ELECTRICAL CONNECTOR**

(75) Inventors: **Guang-Li Huang**, Guang-Dong (CN);
Yin-Lung Wu, New Taipei (TW);
Ming-Chiang Chen, New Taipei (TW)

(73) Assignee: **Cheng Uei Precision Industry Co., Ltd.**, New Taipei (TW)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 30 days.

(21) Appl. No.: **13/398,827**

(22) Filed: **Feb. 16, 2012**

(51) **Int. Cl.**
H01R 11/30 (2006.01)

(52) **U.S. Cl.**
USPC **439/39**

(58) **Field of Classification Search**
USPC 439/39, 607.01, 607.34, 712, 218
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

D236,481 S * 8/1975 Johnston D13/156
7,097,461 B2 * 8/2006 Neidlein 439/66
7,311,526 B2 * 12/2007 Rohrbach et al. 439/39

7,528,736 B2 * 5/2009 Hall et al. 340/854.9
7,566,224 B2 * 7/2009 Wu 439/39
8,052,470 B1 * 11/2011 Lin 439/607.01
8,083,548 B1 * 12/2011 Lin 439/607.34
8,152,533 B1 * 4/2012 Lin 439/39
D663,696 S * 7/2012 Huang et al. D13/147
8,241,043 B1 * 8/2012 Lin 439/39
8,388,354 B1 * 3/2013 Lin et al. 439/39
2007/0161262 A1 * 7/2007 Lloyd 439/39

* cited by examiner

Primary Examiner — Alexander Gilman

(74) *Attorney, Agent, or Firm* — Cheng-Ju Chiang

(57) **ABSTRACT**

An electrical connector includes an insulating housing having a base body of which a front surface is inclined to act as a mating face. The mating face is concaved rearward to define a plurality of terminal grooves penetrating through the base body and a plurality of receiving grooves of substantial U-shape each surrounding one of the terminal grooves. Wherein there are some terminal grooves without being surrounded by any receiving grooves and each of them is located between every two adjacent receiving grooves. A plurality of terminals is inserted forward in the terminal grooves of the insulating housing respectively. Each terminal has a contact end exposed outside through a front end of the corresponding terminal groove. A plurality of magnet units each is of substantial U-shape and is assembled in the receiving groove of the insulating housing.

8 Claims, 3 Drawing Sheets

